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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,571	05/16/2005	Takuhiro Kondo	Got 202NP	5502
23995 7590 06/23/2009 RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005				
EXAMINER				
NGUYEN, VU Q				
ART UNIT		PAPER NUMBER		
3657				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/516,571

**Applicant(s)**

KONDO ET AL.

**Examiner**

VU Q. NGUYEN

**Art Unit**

3657

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1.4.6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1.4.6 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claims 1, 4, 6, and 8 are objected to because of the following informalities:

In claim 1, lines 27-28, "the inner circumference of a lower end of the external cylinder" should be --a lower end of the inner circumference of the external cylinder-- for consistency.

In claim 1, line 29, "a halfway point of the screw shaft" should be --an upper end of the screw shaft--. Please see Fig. 1 of the instant application and the location of bearings 13.

In claim 1, line 34, "the bearing" should be --the bearings-- for consistency.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP 9-327149 (JP '149) in view of U.S. Patent No. 3559027 (Arsem), and further in view of U.S. Patent Application Publication No. 2004/0099472 (Johnson).

Regarding claim 1, JP '149 discloses an electromagnetic shock absorber comprising: a shock absorber body (6, 12) which makes telescopic motion in response to an input from outside; a ball screw mechanism (10, 11) which is arranged at the shock absorber body, converts the telescopic motion into rotary motion, and is composed of a ball nut (11) and a screw shaft (10); a motor (1) which is provided coaxially with the shock absorber body and generates electromagnetic resistance to oppose against the rotary motion to be input into a rotary shaft (1a) of the motor; and a cylindrical member (18) which covers the shock absorber body and the motor from outside and whose part to cover the motor also serves as a frame (18) of the motor; wherein: the shock absorber body has an external cylinder (6) and an internal cylinder (12) to be slidably inserted into the external cylinder; an upper part of the external cylinder (6) extends (as broadly recited, by connection of cylindrical member 18 to external cylinder 6) so as to cover the motor; the ball nut (11) of the ball screw mechanism is fixed to an upper part of the internal cylinder (12) (by means of element 13) and a screw shaft (10) to be spirally engaged with the ball nut is connected with the rotary shaft (1a) of the motor; an outer circumference of the internal cylinder (12) is slidably supported only by a bush (14) installed at an inner circumference of a lower end of the external cylinder (6); an upper end of the screw shaft (10) is rotatably supported through bearings (15) installed inside the external cylinder (6); a first cushion member (21) is installed at a lower end of the screw shaft (10), the first cushion member (21) coming into contact with the ball nut (11) from an under surface when the internal cylinder makes a stroke up to a maximum descent position; and a second cushion

member (20) is installed at a lower end of the bearings (15), the second cushion member (20) coming into contact with the ball nut (11) from a top surface when the internal cylinder makes a stroke up to a maximum ascent position.

Regarding claim 1, JP '149 does not disclose expressly that the frame (18) of the motor (1) is formed as a one-piece, integral structure with an extended part of the external cylinder (6); and the cylindrical member (18) is constituted as a one-piece, integral structure with the external cylinder (6). Instead, JP '149 discloses a two-piece structure joined by bolts (19).

Arsem teaches an electromagnetic shock absorber comprising: a shock absorber body (30, 34) which makes telescopic motion in response to an input from outside, the shock absorber body having an external cylinder (30) and an internal cylinder (34) to be slidably inserted into the external cylinder (column 2, lines 40-51); a motor (4, 38) which is provided coaxially with the shock absorber body; a cylindrical member (30) which covers the shock absorber body and the motor from outside and whose part to cover the motor also serves as a frame (30) of the motor; an upper part of the external cylinder (30) extends so as to cover the motor, and the frame (30) of the motor is formed as a one-piece, integral structure with an extended part of the external cylinder (30); the cylindrical member (30) is constituted as a one-piece integral structure with the external cylinder (30). See Fig. 3.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the electromagnetic shock absorber as taught by JP '149 so that the frame of the motor (i.e., the cylindrical member) is formed as a one-piece, integral

structure with the external cylinder as taught by Arsem. The motivation for doing so would have been to reduce the number of parts, as well as to reduce the size of the electromagnetic shock absorber (by elimination of the outwardly extending flanges used to secure the cylindrical member 18 to the external cylinder 6 by bolts 19; see figures of JP '149). The Examiner also submits that modifying a multi-piece structure to have a one-piece, integral structure is an obvious design choice based on various factors such as cost, availability, manufacturability, space, etc. Also see MPEP 2144.04 (V) (B).

Regarding claim 1, JP '149 does not disclose expressly that the ball nut (11) does not contact an inner circumference of the external cylinder (6).

Johnson teaches a ball screw mechanism (54) comprising a ball nut (52) and a screw shaft (26). Johnson teaches surrounding the ball nut with an isolator member (60) and a shell assembly (62). See Figs. 3-4 and paragraphs 0024-0027.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the electromagnetic shock absorber as taught by JP '149 so that the ball nut is surrounded by an isolator member and a shell assembly as taught by Johnson (and thus, the ball nut would not contact an inner circumference of the external cylinder). The motivation for doing so, as taught by Johnson, would have been to counteract and mitigate many of the adverse conditions that the ball screw mechanism may be exposed to, thereby allowing the ball screw mechanism to be quieter, more robust, and to have a longer life span (see paragraphs 0029-0030, 0039-0045).

Regarding claim 6, see JP '149 and planetary gear mechanism 50.

Regarding claim 8, see JP '149 and cylindrical member 18 and external cylinder 6 having a same diameter. Also see Arsem and the cylindrical member integral with external cylinder 30 being of a same diameter. Thus, the Examiner submits that the combination of JP '149 and Arsem as set forth above meets the limitation of the claim.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP 9-327149 (JP '149) in view of U.S. Patent No. 3559027 (Arsem), and further in view of U.S. Patent Application Publication No. 2004/0099472 (Johnson) as applied to claims 1, 6, and 8 above, and even further in view of U.S. Patent No. 5070284 (Patil et al.).

JP '149, as modified by Arsem and Johnson, is relied upon as set forth above.

JP '149, Arsem, nor Johnson disclose expressly that the rotary shaft of the motor is rotatably supported at its both ends by a pair of bearings installed at the external cylinder.

Patil et al. disclose an electromagnetic shock absorber (100), wherein a rotary shaft (carried by upper end of screw shaft 112; column 5, lines 11-24) of a motor (104) is rotatably supported at its both ends by a pair of bearings (114).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the electromagnetic shock absorber as taught by JP '149 to include bearings at both ends of the rotary shaft of the motor as taught by Patil et al. The suggestion/motivation for doing so would have been to provide support and guidance, as is well-known in the art, for the rotary shaft of the motor.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 4, 6, and 8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VU Q. NGUYEN whose telephone number is (571) 272-7921. The examiner can normally be reached on Monday through Friday, 11:30 AM to 8:00 PM, EST.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. Q. N./  
Examiner, Art Unit 3657

/Robert A. Siconolfi/  
Supervisory Patent Examiner, Art  
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